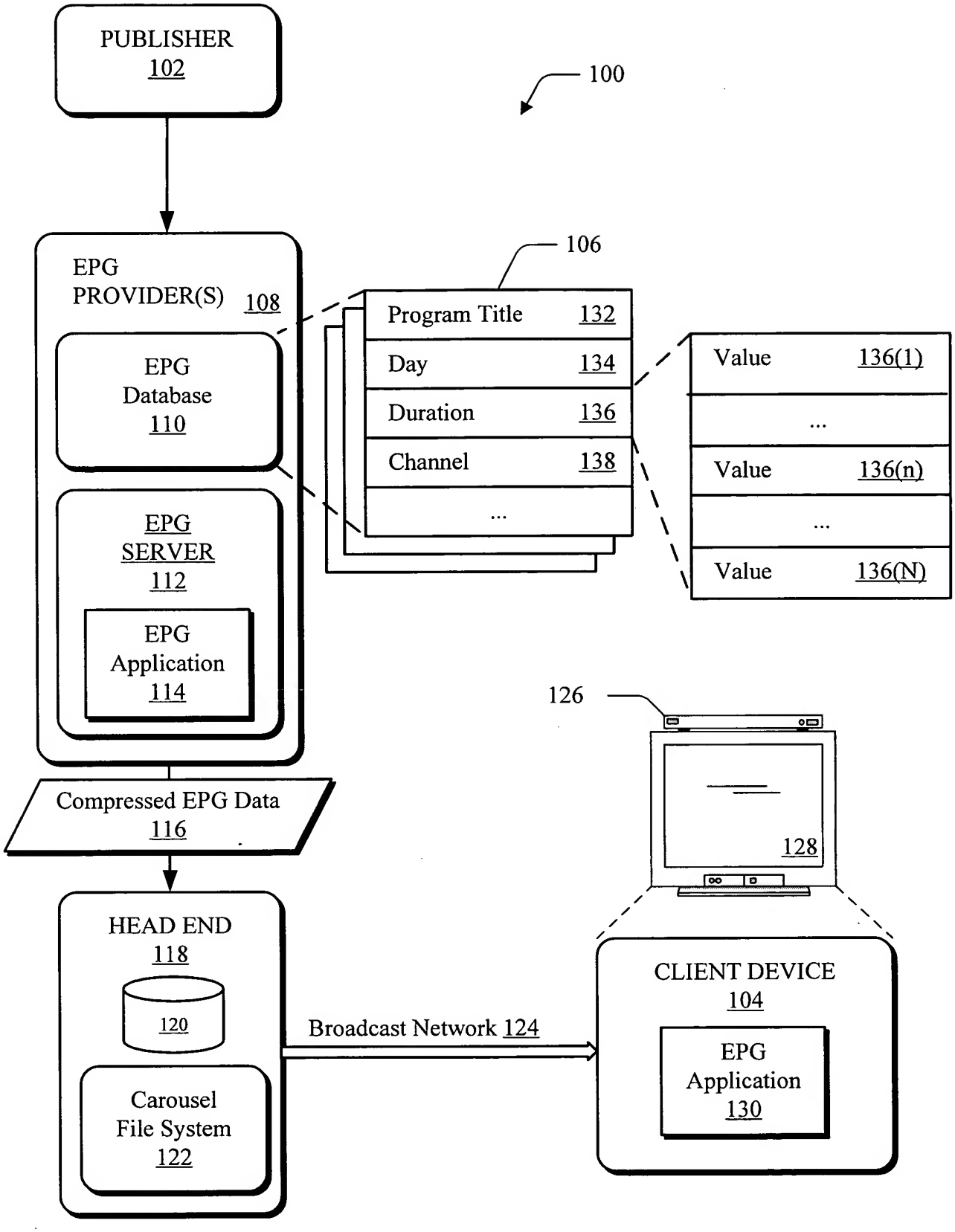

PUBLISHER
102
100
EPG
PROVIDER(S) 108
EPG
Database
110
EPG
SERVER
112
EPG
Application
114
106
Program Title 132
Day 134
Duration 136
Channel 138
...
Value 136(1)
...
Value 136(n)
...
Value 136(N)
Compressed EPG Data
116
126
128
HEAD END
118
120
Carousel
File System
122
Broadcast Network 124
CLIENT DEVICE
104
EPG
Application
130

Fig. 1

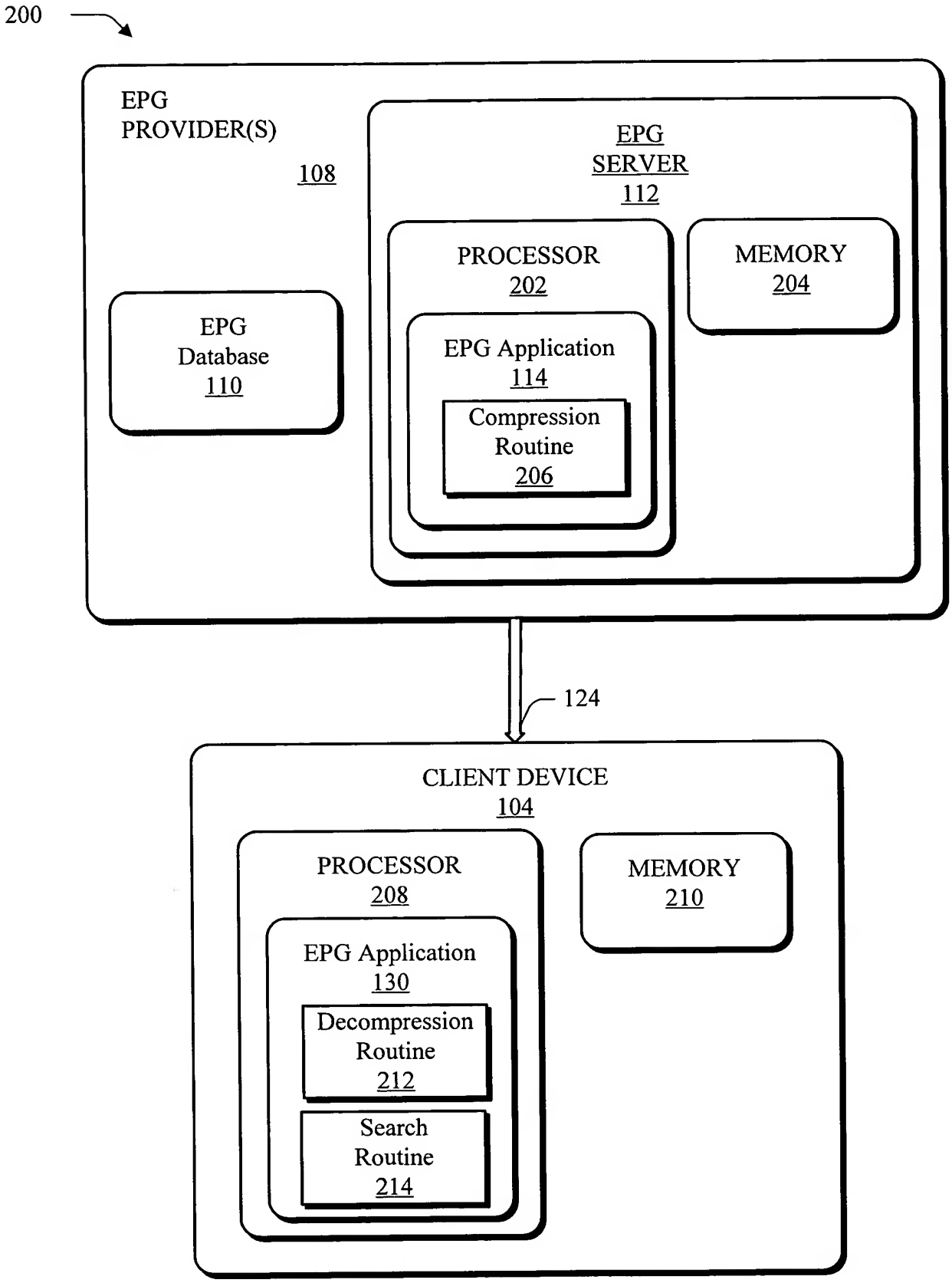

200
EPG
PROVIDER(S)
108
EPG
SERVER
112
PROCESSOR
202
MEMORY
204
EPG
Database
110
EPG Application
114
Compression
Routine
206
124
CLIENT DEVICE
104
PROCESSOR
208
MEMORY
210
EPG Application
130
Decompression
Routine
212
Search
Routine
214

Fig. 2

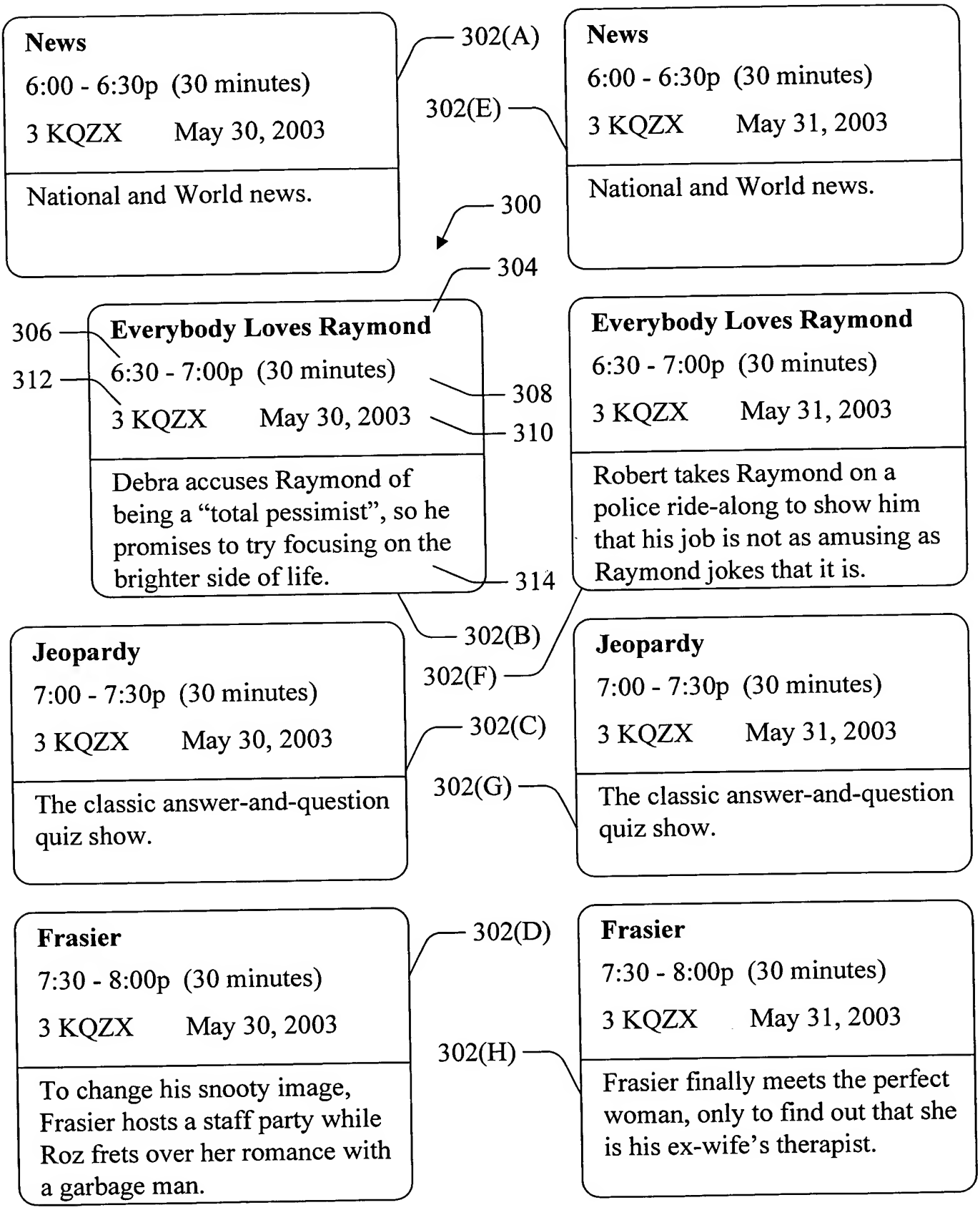

News
6:00 - 6:30p (30 minutes)
3 KQZX May 30, 2003
National and World news.
302(A)
302(E)
News
6:00 - 6:30p (30 minutes)
3 KQZX May 31, 2003
National and World news.
300
304
306
312
Everybody Loves Raymond
6:30 - 7:00p (30 minutes)
3 KQZX May 30, 2003
308
310
Debra accuses Raymond of being a "total pessimist", so he promises to try focusing on the brighter side of life.
314
Everybody Loves Raymond
6:30 - 7:00p (30 minutes)
3 KQZX May 31, 2003
Robert takes Raymond on a police ride-along to show him that his job is not as amusing as Raymond jokes that it is.
302(B)
302(F)
Jeopardy
7:00 - 7:30p (30 minutes)
3 KQZX May 30, 2003
The classic answer-and-question quiz show.
302(C)
302(G)
Jeopardy
7:00 - 7:30p (30 minutes)
3 KQZX May 31, 2003
The classic answer-and-question quiz show.
Frasier
7:30 - 8:00p (30 minutes)
3 KQZX May 30, 2003
To change his snooty image, Frasier hosts a staff party while Roz frets over her romance with a garbage man.
302(D)
302(H)
Frasier
7:30 - 8:00p (30 minutes)
3 KQZX May 31, 2003
Frasier finally meets the perfect woman, only to find out that she is his ex-wife's therapist.

Fig. 3

400

List of Words Sorted by Memory Space Occupied

Occurrences Size	Occurrences	Words	Occurrences Size	Occurrences	Words	Occurrences Size	Occurrences	Words
56	8	minutes	8	4	brighter	5	1	while
35	5	raymond	8	1	focusing	5	1	woman
32	8	2002	8	1	promises	4	4	a
32	8	kqzx	8	2	quiz	4	2	as
30	15	30	7	1	accuses	4	1	find
28	4	frasier	7	1	amusing	4	1	life
24	8	may	7	1	finally	4	2	of
18	2	everybody	7	1	garbage	4	2	on
16	2	jeopardy	7	1	perfect	4	1	only
16	2	national	7	1	romance	4	1	over
16	4	news	6	6	6	4	1	ride
16	2	question	6	1	change	4	1	side
14	4	classic	6	3	is	4	1	wife
12	4	00p	6	1	police	4	1	with
12	4	30p	6	1	Robert	3	1	her
12	2	and	6	1	snooty	3	1	him
12	3	answer	6	3	to	3	1	job
12	3	show	5	1	along	3	1	man
12	2	that	5	1	being	3	1	not
12	4	the	5	1	debra	3	1	out
10	3	loves	5	1	frets	3	1	roz
10	1	world	5	1	hosts	3	1	she
9	1	his	5	1	image	3	1	try
9	4	pessimist	5	1	jokes	2	2	8
9	8	therapist	5	1	meets	2	1	ex
8	4	0	5	1	party	2	1	he
8	8	3	5	1	staff	2	1	it
8	1	31	5	1	takes	2	1	so
8	1	7	5	1	total	2	1	to
						1	1	s

404 406 402

Fig. 4

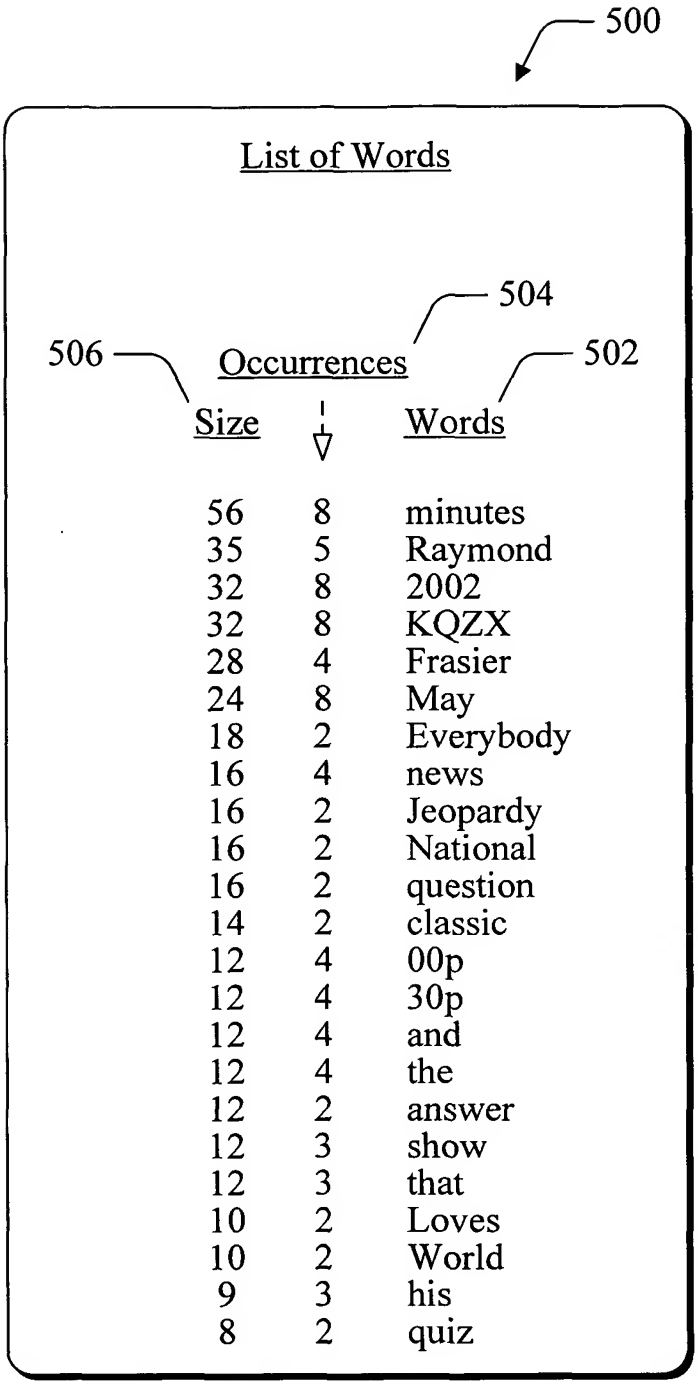

500
List of Words
504
506
Occurrences
502
Size
Words
56 8 minutes
35 5 Raymond
32 8 2002
32 8 KQZX
28 4 Frasier
24 8 May
18 2 Everybody
16 4 news
16 2 Jeopardy
16 2 National
16 2 question
14 2 classic
12 4 00p
12 4 30p
12 4 and
12 4 the
12 2 answer
12 3 show
12 3 that
10 2 Loves
10 2 World
9 3 his
8 2 quiz

Fig. 5

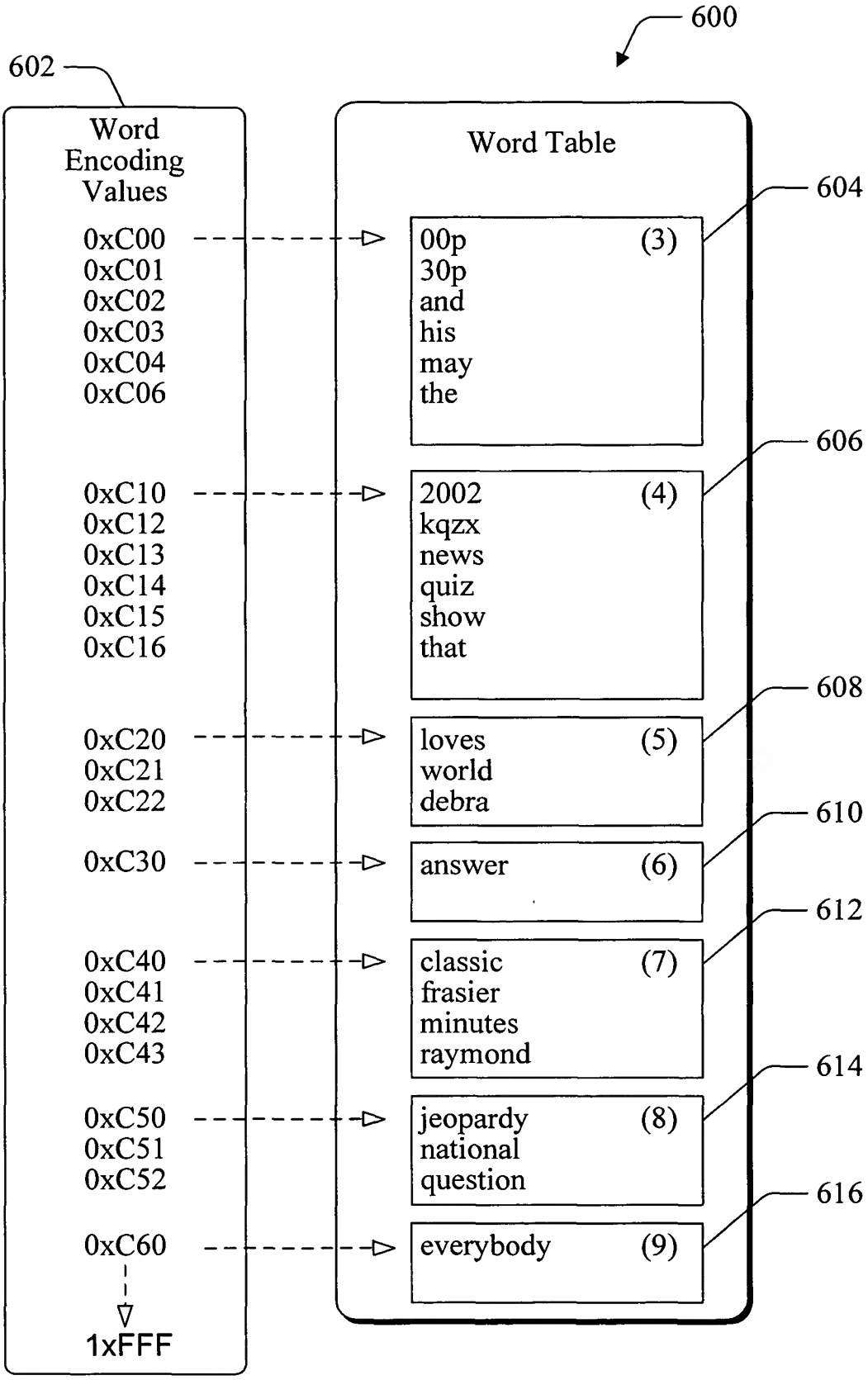

600
602
Word Encoding Values
0xC00
0xC01
0xC02
0xC03
0xC04
0xC06
0xC10
0xC12
0xC13
0xC14
0xC15
0xC16
0xC20
0xC21
0xC22
0xC30
0xC40
0xC41
0xC42
0xC43
0xC50
0xC51
0xC52
0xC60
1xFFF
Word Table
00p (3)
30p
and
his
may
the
2002 (4)
kqzx
news
quiz
show
that
loves (5)
world
debra
answer (6)
classic (7)
frasier
minutes
raymond
jeopardy (8)
national
question
everybody (9)
604
606
608
610
612
614
616

Fig. 6

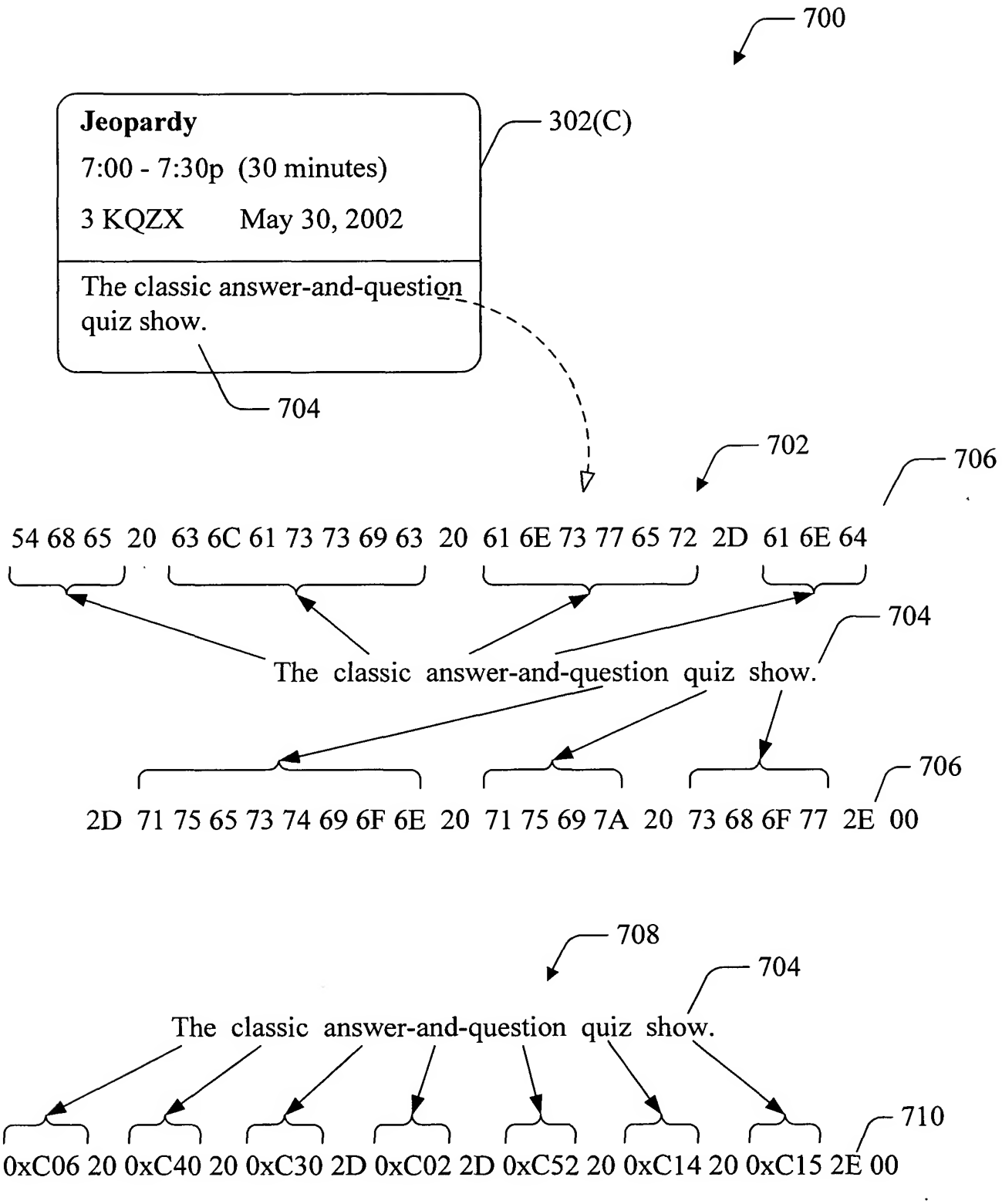

700
Jeopardy
7:00 - 7:30p (30 minutes)
3 KQZX May 30, 2002
The classic answer-and-question quiz show.
302(C)
704
702
706
54 68 65 20 63 6C 61 73 73 69 63 20 61 6E 73 77 65 72 2D 61 6E 64
704
The classic answer-and-question quiz show.
706
2D 71 75 65 73 74 69 6F 6E 20 71 75 69 7A 20 73 68 6F 77 2E 00
708
704
The classic answer-and-question quiz show.
710
0xC06 20 0xC40 20 0xC30 2D 0xC02 2D 0xC52 20 0xC14 20 0xC15 2E 00

Fig. 7

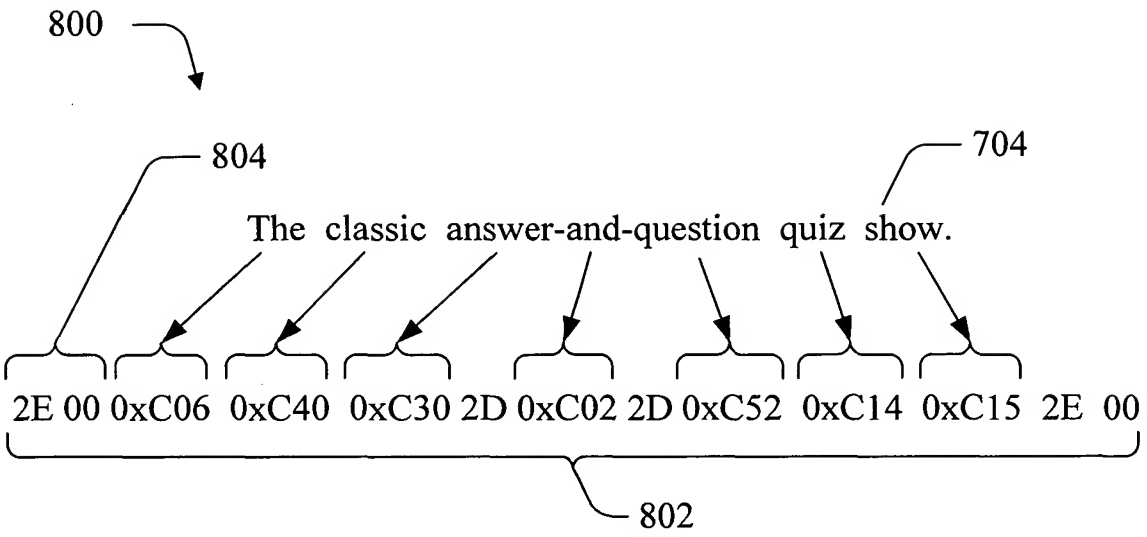

800
804
704
The classic answer-and-question quiz show.
2E 00 0xC06 0xC40 0xC30 2D 0xC02 2D 0xC52 0xC14 0xC15 2E 00
802

Fig. 8

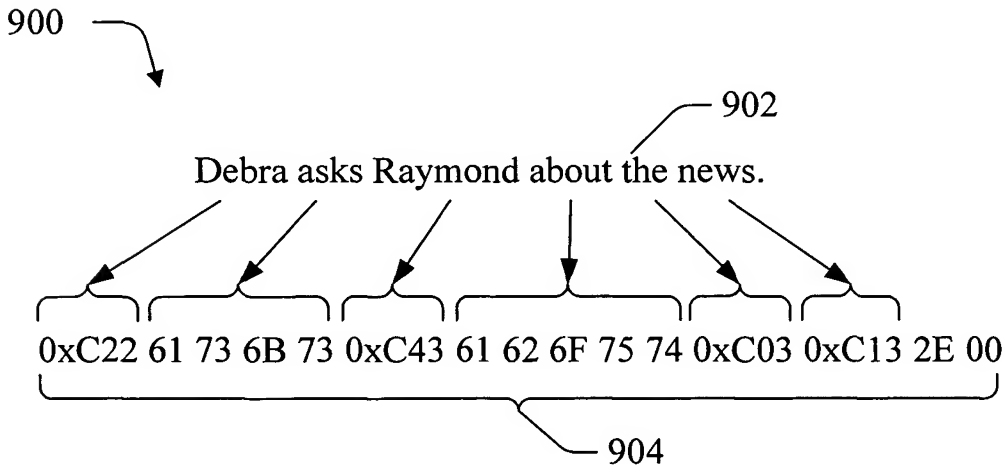
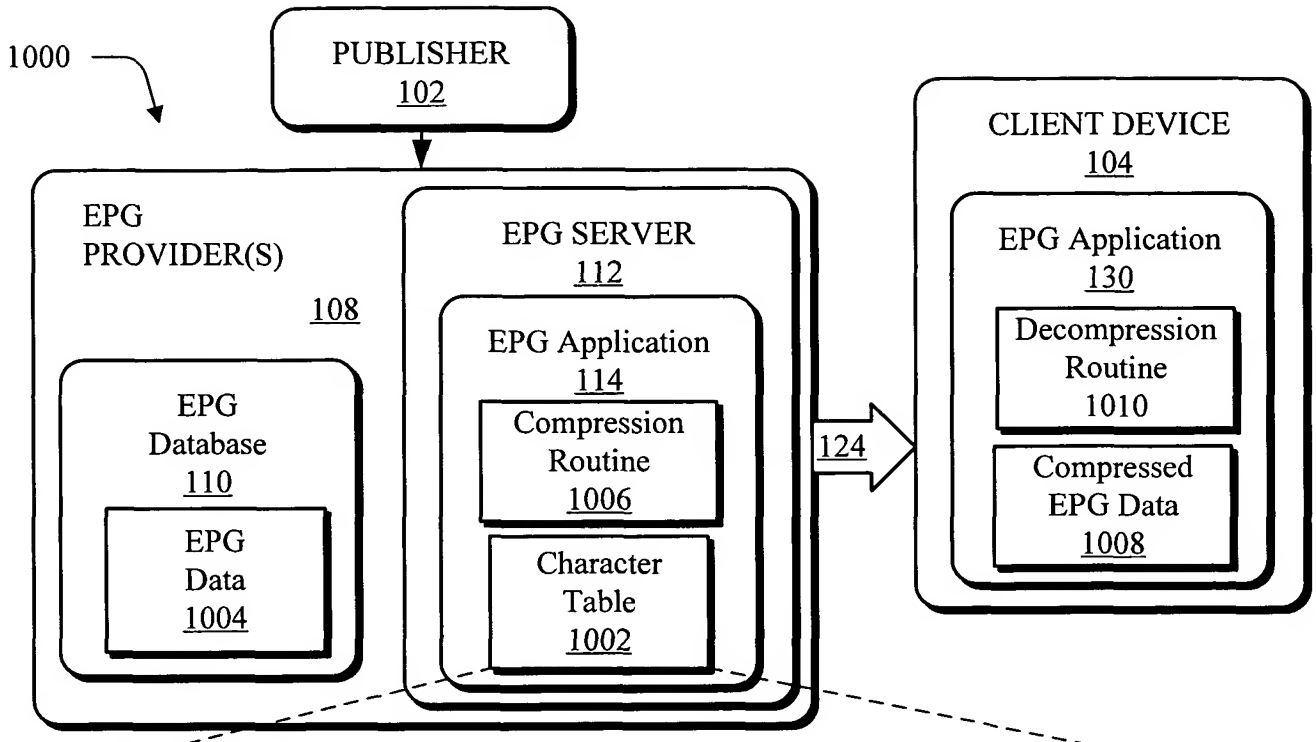

900
902
Debra asks Raymond about the news.
0xC22 61 73 6B 73 0xC43 61 62 6F 75 74 0xC03 0xC13 2E 00
904

Fig. 9

Title: EPG Data



Character Table 1002

```
000000 00 65 73 65 61 69 6f 74  6f 64 61 61 65 73 61 79  .eseaiotodaaesay
000010 72 69 05 3b 73 6f 65 69  72 66 69 54 07 12 72 74  ri.;soeirfiT..rt
000020 20 21 61 63 6f 6f 26 27  28 29 6f 1b 2c 2d 2e 2f   !acoo&'()o.,-./
000030 30 31 32 33 34 35 36 37  38 39 3a 3b 04 65 65 3f  0123456789:;.ee?
000040 27 41 42 43 44 45 46 47  48 49 4a 4b 4c 4d 4e 4f  'ABCDEFGHIJKLMNO
000050 50 51 52 53 54 55 56 57  69 59 5a 65 6f 72 03 61  PQRSTUVWiYZeor.a
000060 60 61 62 63 64 65 66 67  68 69 6a 6b 6c 6d 6e 6f  `abcdefghijklmno
000070 70 71 72 73 74 75 76 77  78 79 7a 69 69 61 2c 61  pqrstuvwxyziia,a
000080 6f 04 82 0e 0c 69 07 43  74 0d 6c 69 69 6b 75 05  o....i.Ct.liiku.
000090 6f 75 0b 11 66 69 61 6f  6f 65 74 08 61 65 69 6d  ou..fiaooet.aeim
0000a0 75 4e 65 0b a4 15 61 65  70 85 6f 6f 0e 69 73 53  uNe...aep.oo.isS
0000b0 61 65 6e 75 03 43 4c 61  6f 73 06 0c 52 65 6c 49  aenu.CLaos..RelI
0000c0 61 6f 70 16 57 61 65 6f  75 04 2e 65 74 41 65 69  aop.Waeou..etAei
0000d0 70 10 53 61 69 6c 7c 02  0a 0c 67 6c 6d 74 7d 94  p.Sail|...glmt}.
0000e0 03 06 26 57 65 69 6f 75  7b 04 06 10 15 23 41 65  ..&Weiou{....#Ae
0000f0 77 79 91 0a 41 53 61 73  b6 04 08 1e 2e 2e 61 ff  wy..ASas......a.
000100 00 20 20 72 6e 6e 72 68  6e 20 72 74 6e 74 6c 20  .  rnnrhn rtntl
000110 65 63 67 20 2e 75 6c 74  6f 20 6c 68 01 20 61 20  ecg .ulto lh. a
000120 01 01 20 68 6d 20 01 01  01 01 19 01 01 01 01 01  .. hm ..........
000130 01 01 01 01 01 01 01 01  01 01 01 01 09 73 02 01  .............s..
000140 02 01 01 01 01 01 01 01  01 01 01 01 01 01 01 01  ................
000150 01 01 01 01 01 01 01 01  08 01 01 77 6c 69 20 6d  ...........wli m
000160 01 01 01 01 01 01 01 01  01 01 01 01 01 01 01 01  ................
000170 01 01 01 01 01 01 01 01  01 01 01 76 73 73 20 63  ...........yss c
000180 77 20 01 20 74 67 20 68  25 20 65 64 72 20 72 20  w . tg h% edr r
000190 70 73 20 20 06 86 64 74  73 74 03 20 79 09 0d 20  ps  ..dtst. y..
0001a0 6e 5b 2e 58 01 6e 67 63  06 68 6f 76 6c 6d 13 74  n[.X.ngc.hovlm.t
0001b0 76 64 20 6c 02 6c 7b 70  64 68 6c 20 65 0a 01 6e  vd l.l{pdhl e..n
0001c0 62 63 68 20 95 6b 14 67  64 64 47 6d 02 20 89 66  bch .k.gddGm. .f
0001d0 6c 73 70 75 02 20 68 2a  20 64 20 6f 04 72 73 20  lspu. h* d o.rs
0001e0 73 6e 20 ba 78 70 62 10  01 6e 20 92 73 20 6e 13  sn .xpb..n .s n.
0001f0 95 2e 11 74 6c 68 7a 70  65 74 74 63 20 2b 0d 00  ...tlhzpettc +..
```

Fig. 10

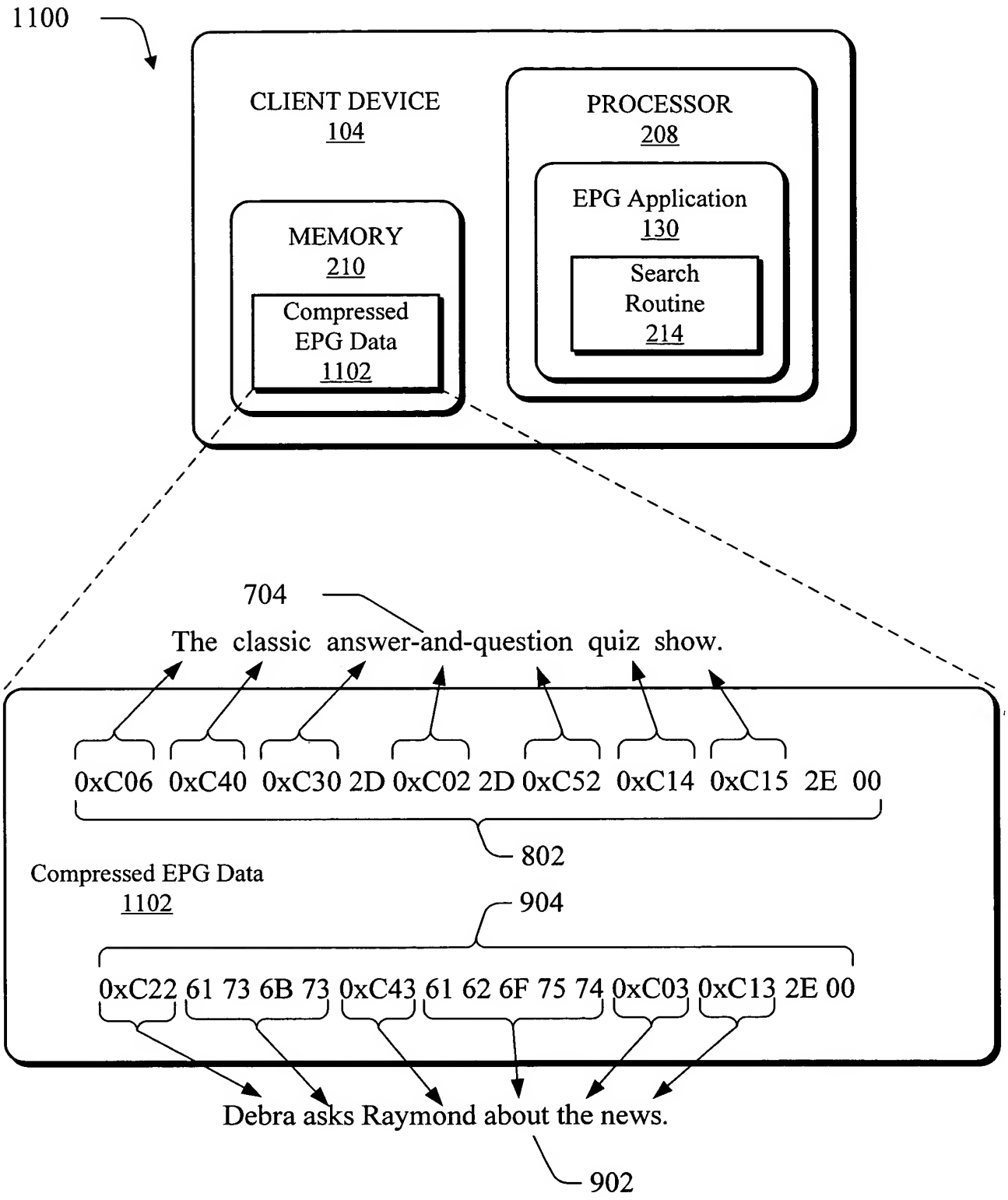

1100
CLIENT DEVICE
104
PROCESSOR
208
EPG Application
130
Search
Routine
214
MEMORY
210
Compressed
EPG Data
1102
704
The classic answer-and-question quiz show.
0xC06 0xC40 0xC30 2D 0xC02 2D 0xC52 0xC14 0xC15 2E 00
802
Compressed EPG Data
1102
904
0xC22 61 73 6B 73 0xC43 61 62 6F 75 74 0xC03 0xC13 2E 00
Debra asks Raymond about the news.
902

Fig. 11

Title: EPG Data

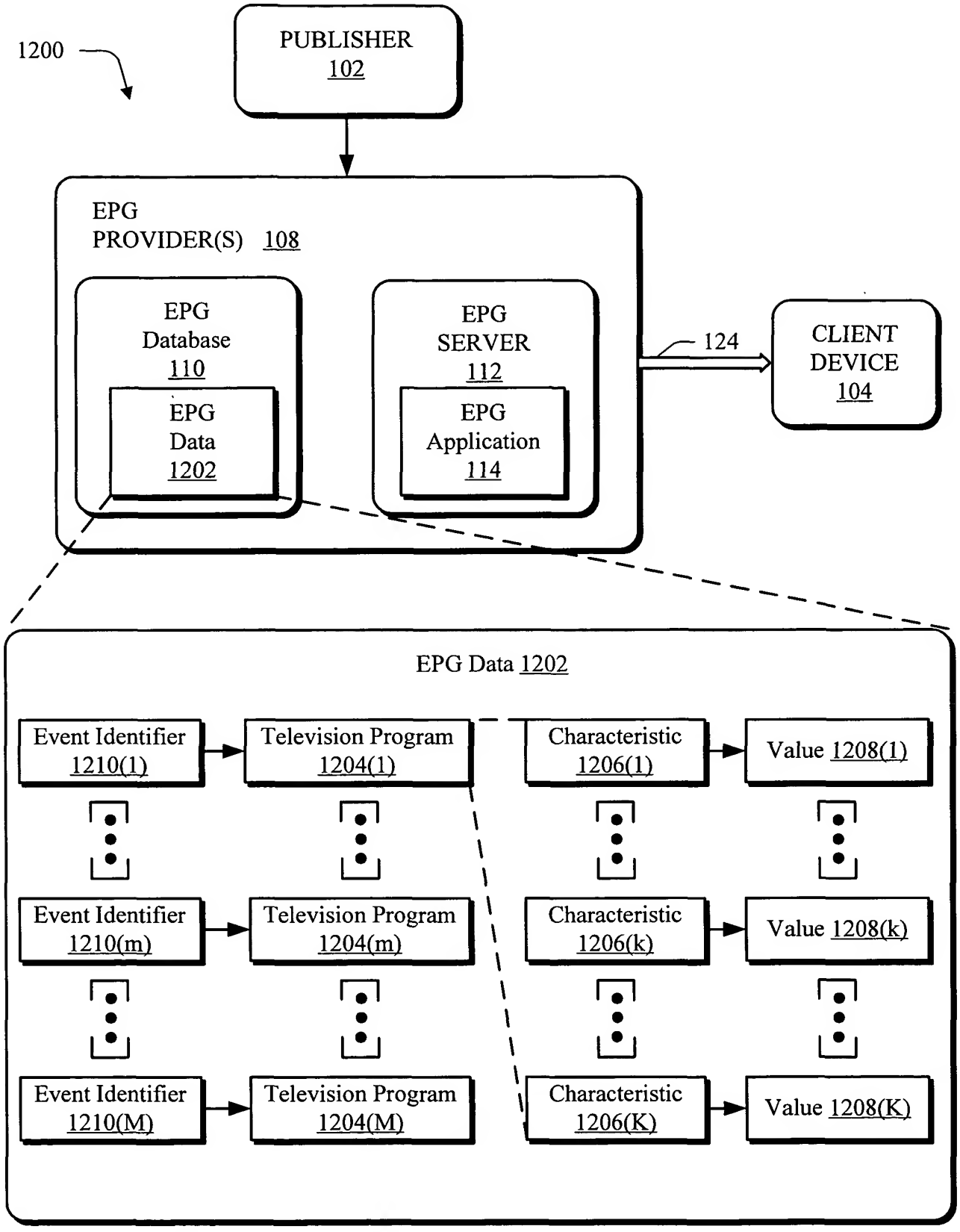


Fig. 12

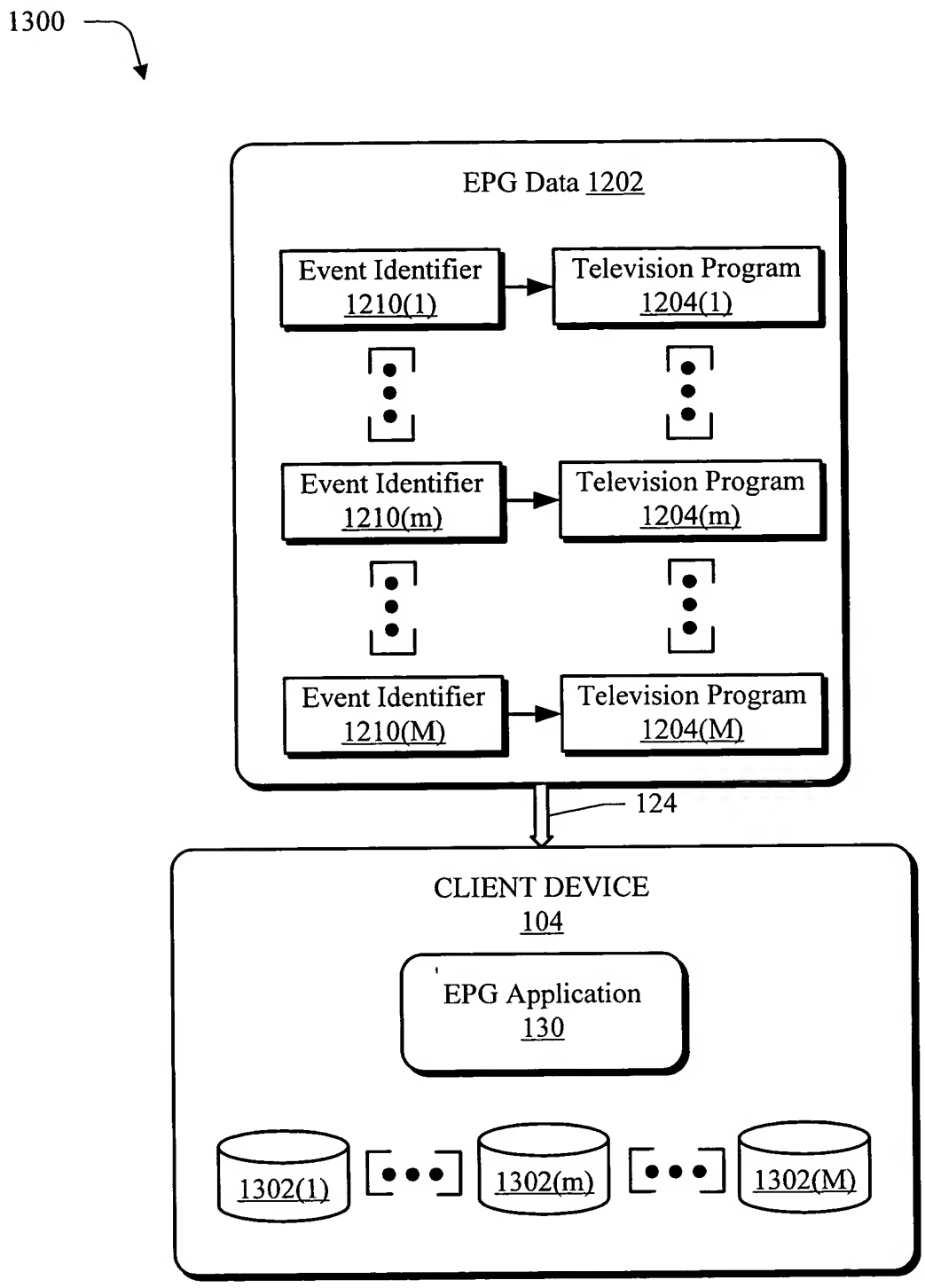

1300
EPG Data 1202
Event Identifier 1210(1)
Television Program 1204(1)
Event Identifier 1210(m)
Television Program 1204(m)
Event Identifier 1210(M)
Television Program 1204(M)
124
CLIENT DEVICE 104
EPG Application 130
1302(1)
1302(m)
1302(M)

Fig. 13

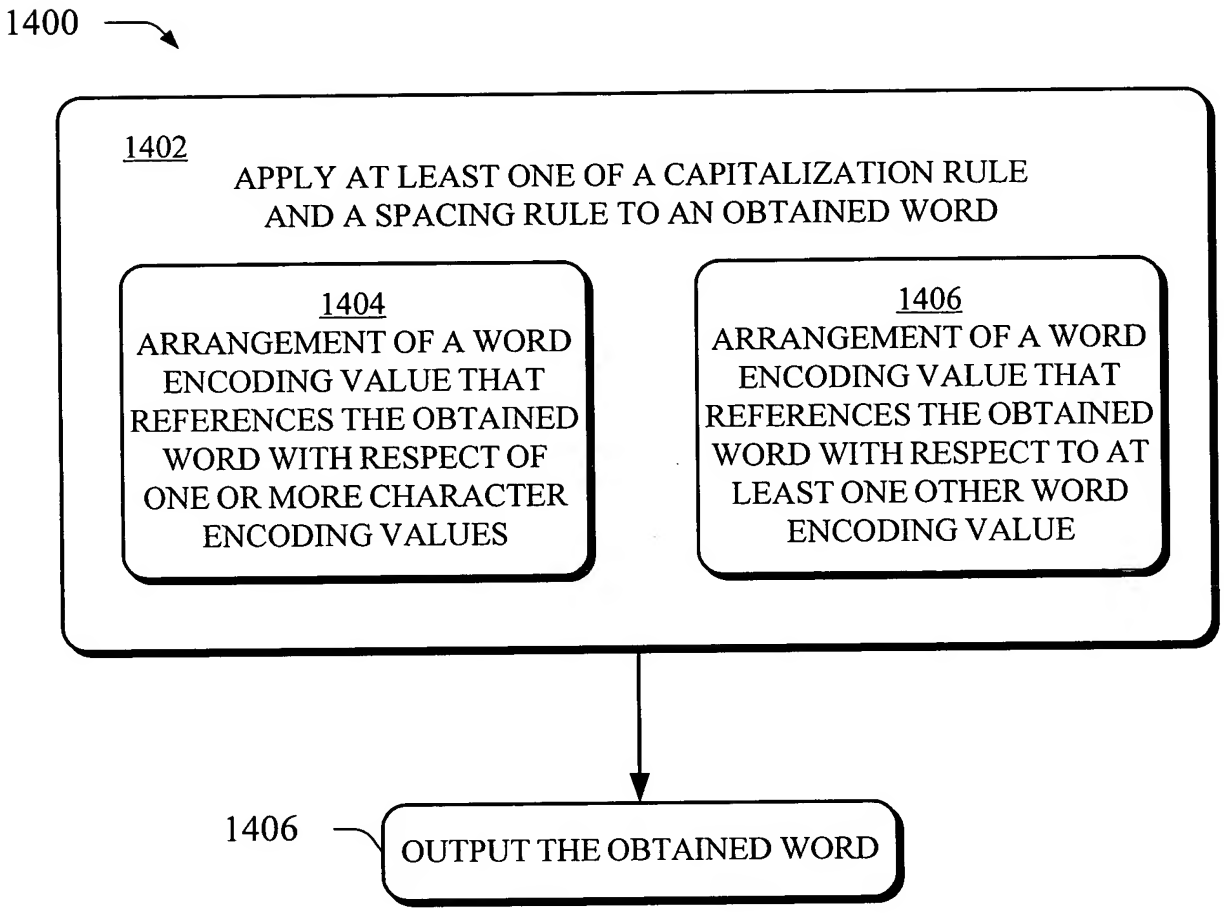

1400
1402
APPLY AT LEAST ONE OF A CAPITALIZATION RULE AND A SPACING RULE TO AN OBTAINED WORD
1404
ARRANGEMENT OF A WORD ENCODING VALUE THAT REFERENCES THE OBTAINED WORD WITH RESPECT OF ONE OR MORE CHARACTER ENCODING VALUES
1406
ARRANGEMENT OF A WORD ENCODING VALUE THAT REFERENCES THE OBTAINED WORD WITH RESPECT TO AT LEAST ONE OTHER WORD ENCODING VALUE
1406
OUTPUT THE OBTAINED WORD

Fig. 14

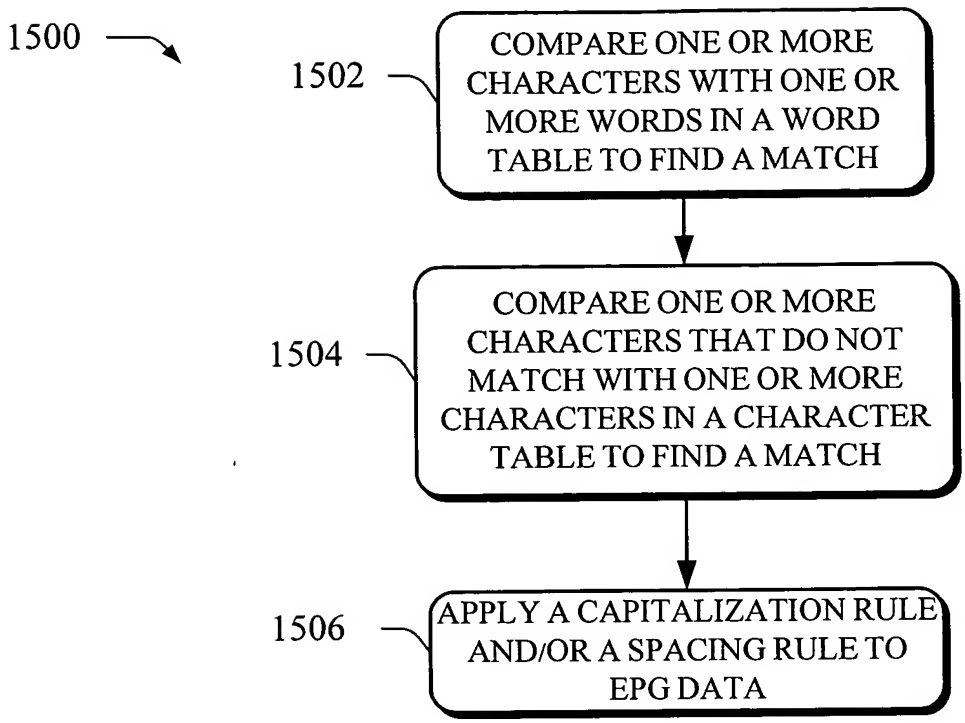

1500
1502
COMPARE ONE OR MORE CHARACTERS WITH ONE OR MORE WORDS IN A WORD TABLE TO FIND A MATCH
1504
COMPARE ONE OR MORE CHARACTERS THAT DO NOT MATCH WITH ONE OR MORE CHARACTERS IN A CHARACTER TABLE TO FIND A MATCH
1506
APPLY A CAPITALIZATION RULE AND/OR A SPACING RULE TO EPG DATA

Fig. 15

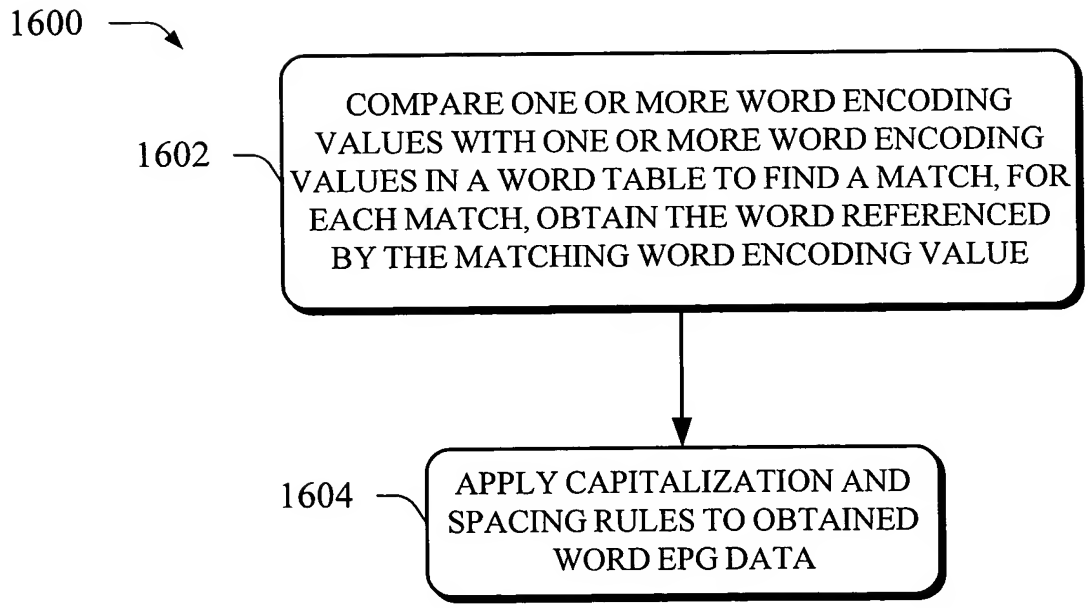

1600
1602
COMPARE ONE OR MORE WORD ENCODING VALUES WITH ONE OR MORE WORD ENCODING VALUES IN A WORD TABLE TO FIND A MATCH, FOR EACH MATCH, OBTAIN THE WORD REFERENCED BY THE MATCHING WORD ENCODING VALUE
1604
APPLY CAPITALIZATION AND SPACING RULES TO OBTAINED WORD EPG DATA

Fig. 16

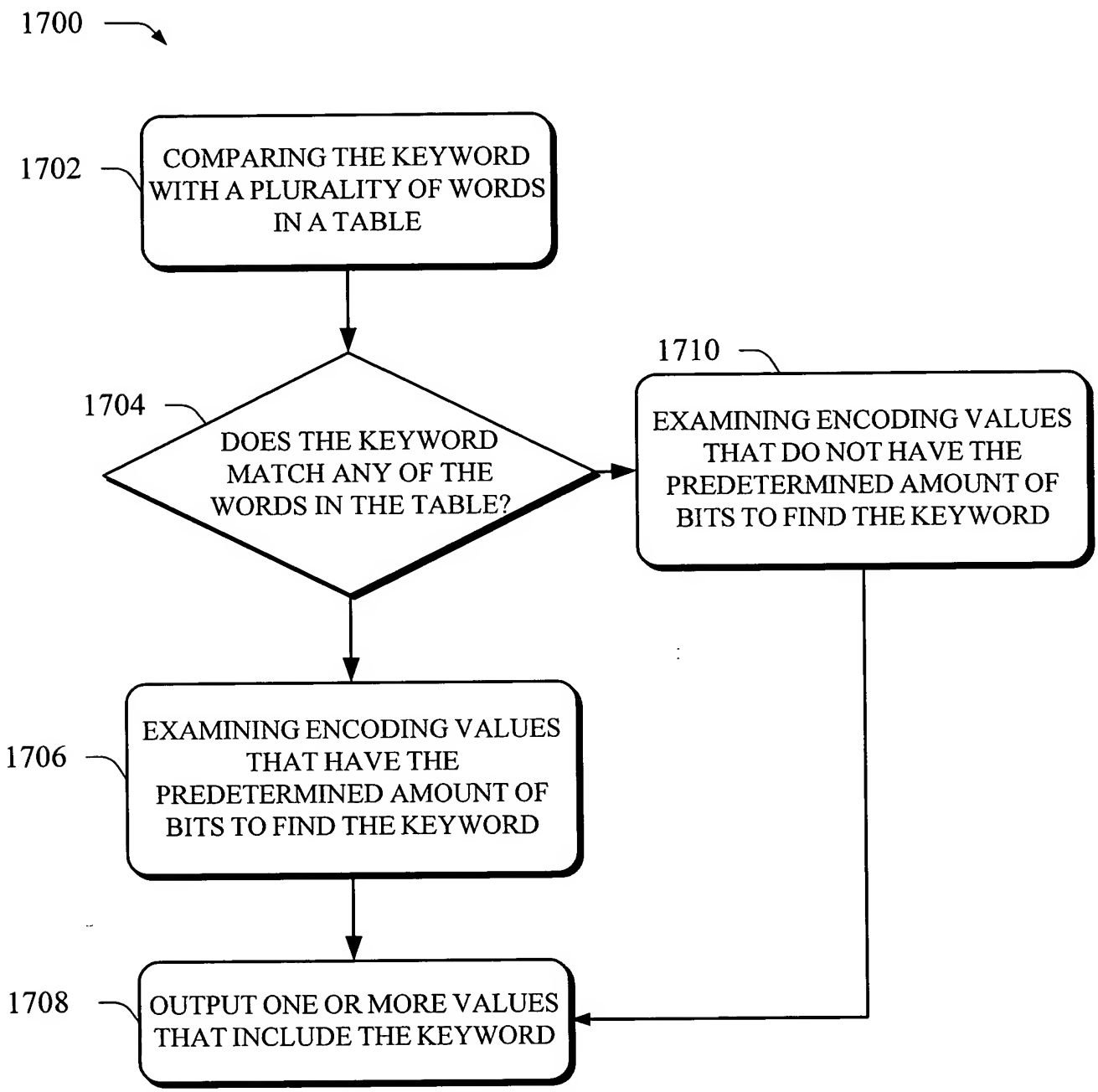

1700
1702
COMPARING THE KEYWORD WITH A PLURALITY OF WORDS IN A TABLE
1704
DOES THE KEYWORD MATCH ANY OF THE WORDS IN THE TABLE?
1710
EXAMINING ENCODING VALUES THAT DO NOT HAVE THE PREDETERMINED AMOUNT OF BITS TO FIND THE KEYWORD
1706
EXAMINING ENCODING VALUES THAT HAVE THE PREDETERMINED AMOUNT OF BITS TO FIND THE KEYWORD
1708
OUTPUT ONE OR MORE VALUES THAT INCLUDE THE KEYWORD

Fig. 17

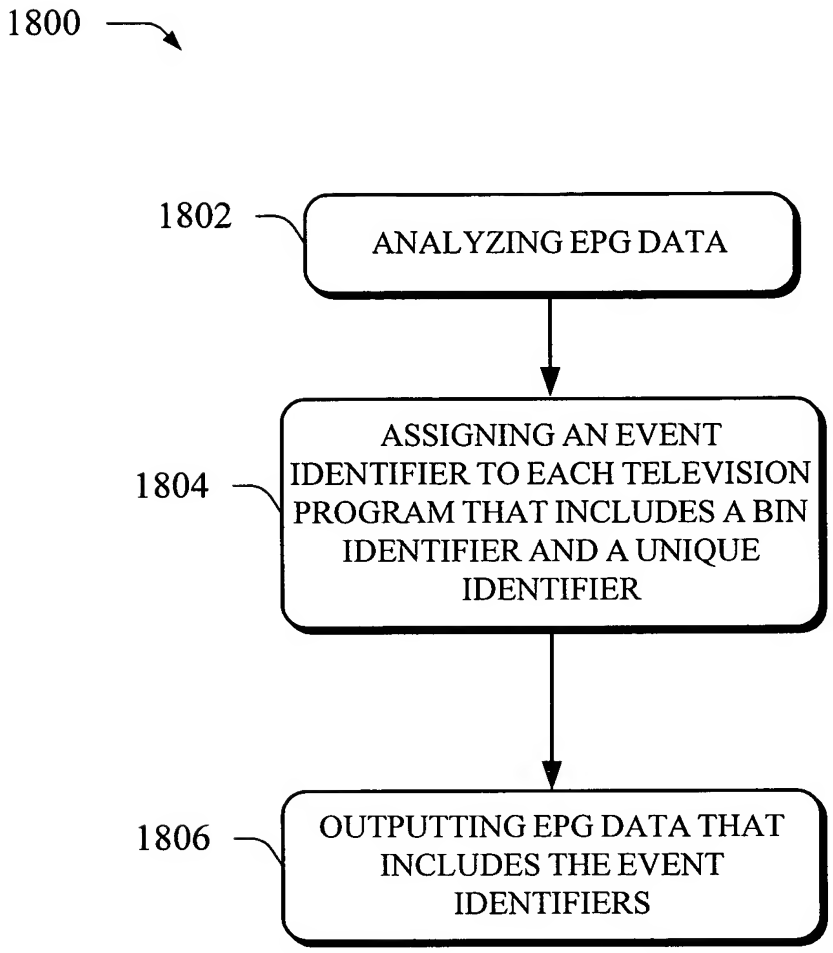

1800
1802
ANALYZING EPG DATA
1804
ASSIGNING AN EVENT IDENTIFIER TO EACH TELEVISION PROGRAM THAT INCLUDES A BIN IDENTIFIER AND A UNIQUE IDENTIFIER
1806
OUTPUTTING EPG DATA THAT INCLUDES THE EVENT IDENTIFIERS

Fig. 18

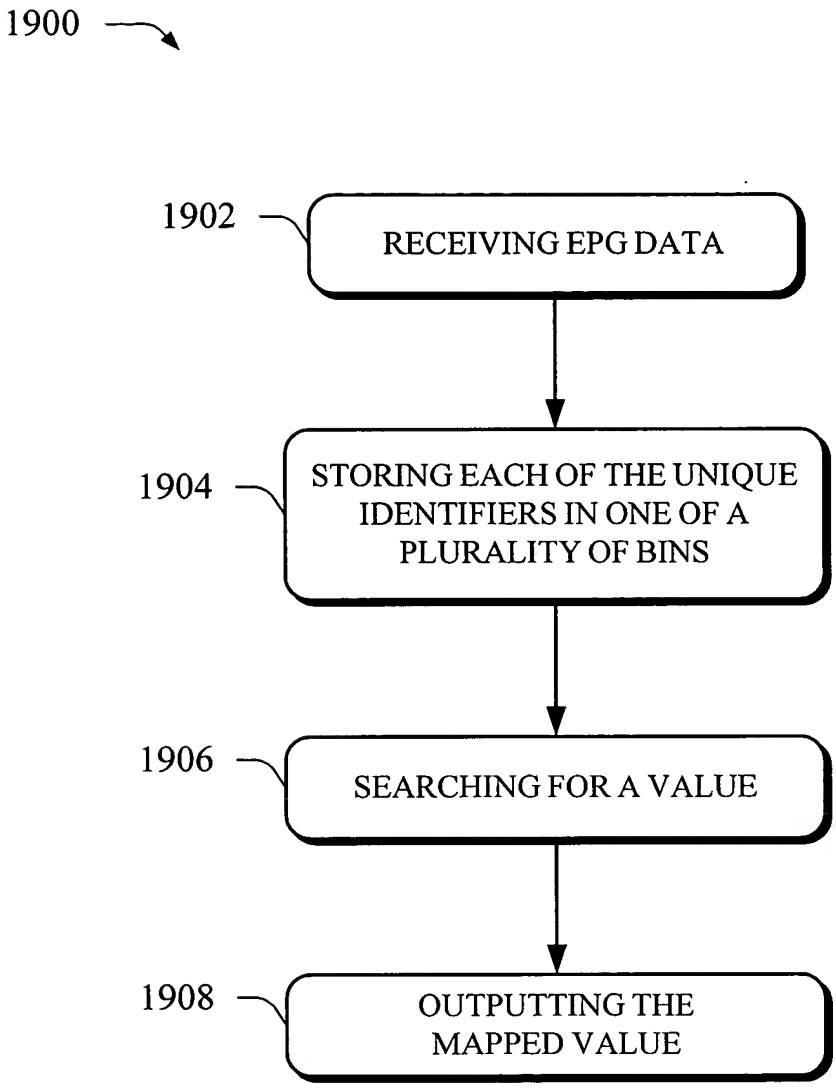

1900
1902
RECEIVING EPG DATA
1904
STORING EACH OF THE UNIQUE IDENTIFIERS IN ONE OF A PLURALITY OF BINS
1906
SEARCHING FOR A VALUE
1908
OUTPUTTING THE MAPPED VALUE

Fig. 19

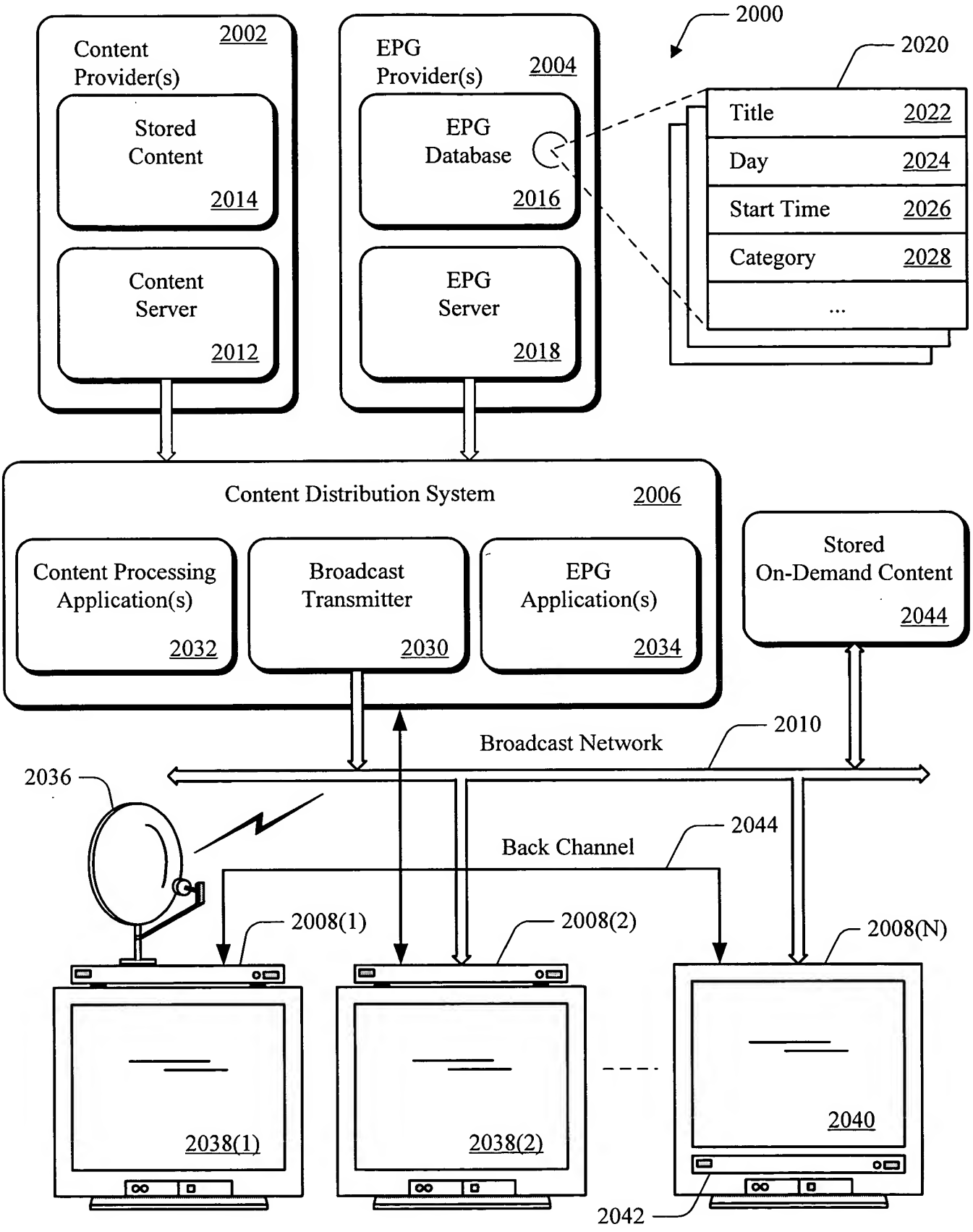

2000
2002
Content Provider(s)
Stored Content
2014
Content Server
2012
2004
EPG Provider(s)
EPG Database
2016
EPG Server
2018
2020
Title 2022
Day 2024
Start Time 2026
Category 2028
...
Content Distribution System
2006
Content Processing Application(s)
2032
Broadcast Transmitter
2030
EPG Application(s)
2034
Stored On-Demand Content
2044
Broadcast Network
2010
2036
Back Channel
2044
2008(1)
2008(2)
2008(N)
2038(1)
2038(2)
2040
2042

Fig. 20

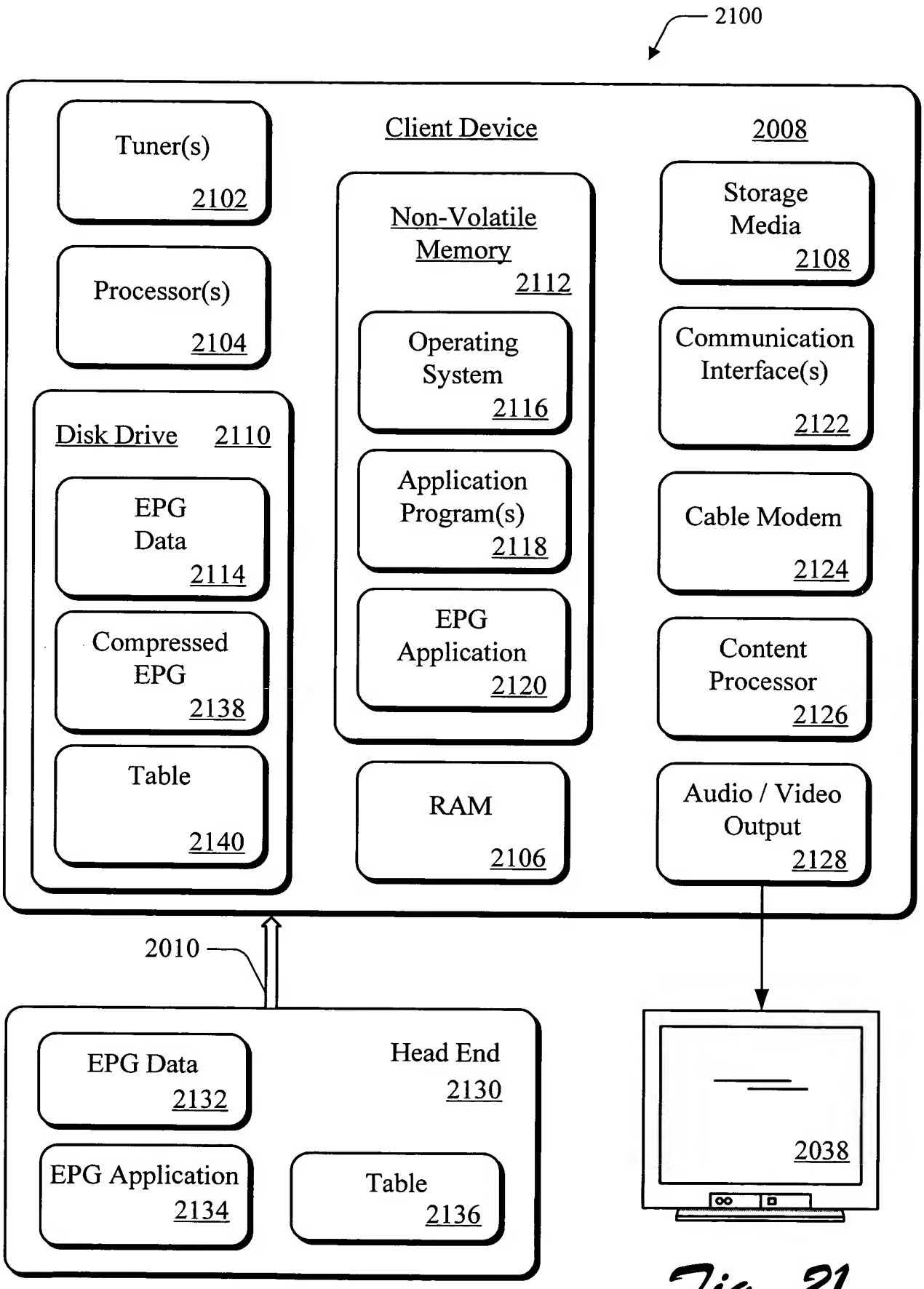

2100
Client Device
2008
Tuner(s)
2102
Processor(s)
2104
Disk Drive
2110
EPG Data
2114
Compressed EPG
2138
Table
2140
Non-Volatile Memory
2112
Operating System
2116
Application Program(s)
2118
EPG Application
2120
RAM
2106
Storage Media
2108
Communication Interface(s)
2122
Cable Modem
2124
Content Processor
2126
Audio / Video Output
2128
2010
EPG Data
2132
Head End
2130
EPG Application
2134
Table
2136
2038

Fig. 21